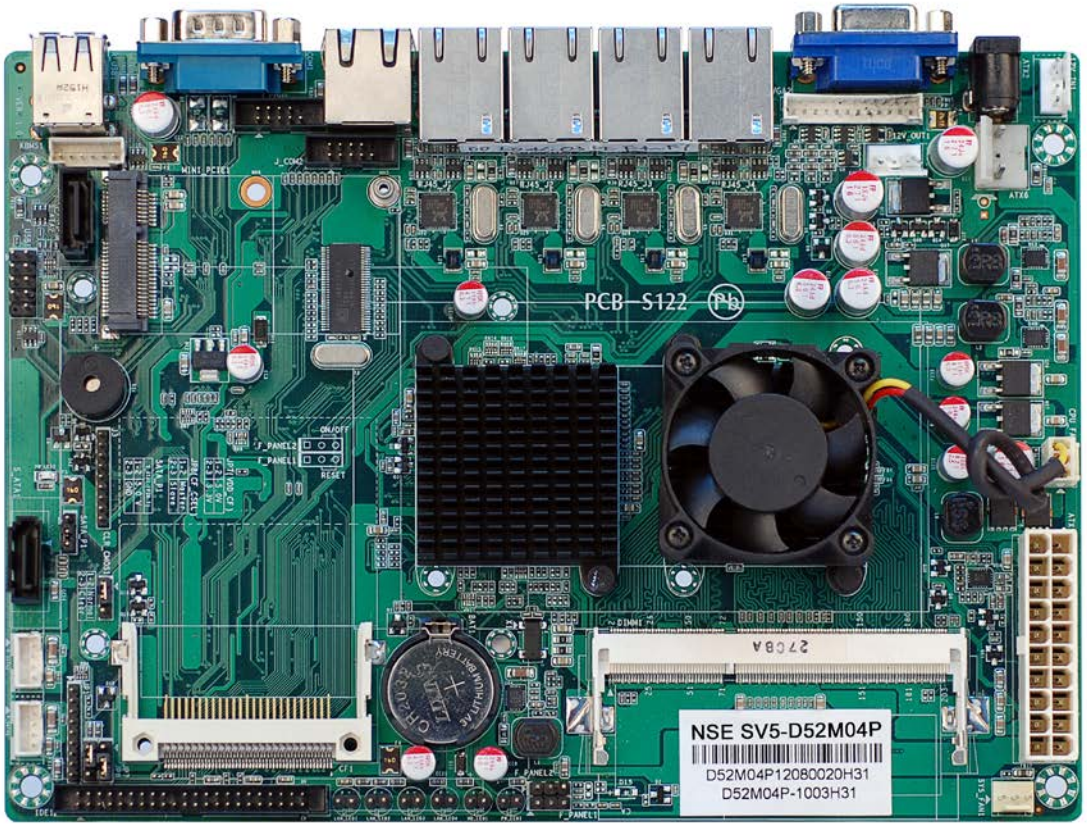
NSE SV5-D52M04P Series Motherboard User Guide

Ver 1.0



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1. Models and Attentions

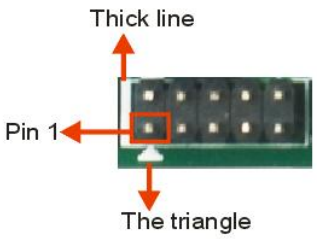
1.1 Models

This manual is applied to following models:

Model	CPU & Chipset	DC Power Supply	ATX Power Supply	LAN	VGA Port	Mini PCI-E
NSE SV5-D52M04P	Intel D525 + ICH8M	√	√	4	Header	mSATA
NSE SV5-D42M04P	Intel D425 + ICH8M	√	√	4	Header	mSATA

1.2 Attentions

1) Notes under a table or figure indicate the difference of models, or alternative definition of specific pin of the header (jumper/connector).
2) How to identify the first pin of a header or jumper?
   □ Usually, there is a thick line or a triangle near the header's or jumper's pin 1.



   □ Square pad, which you can find on the back of the motherboard, is usually used for pin 1.

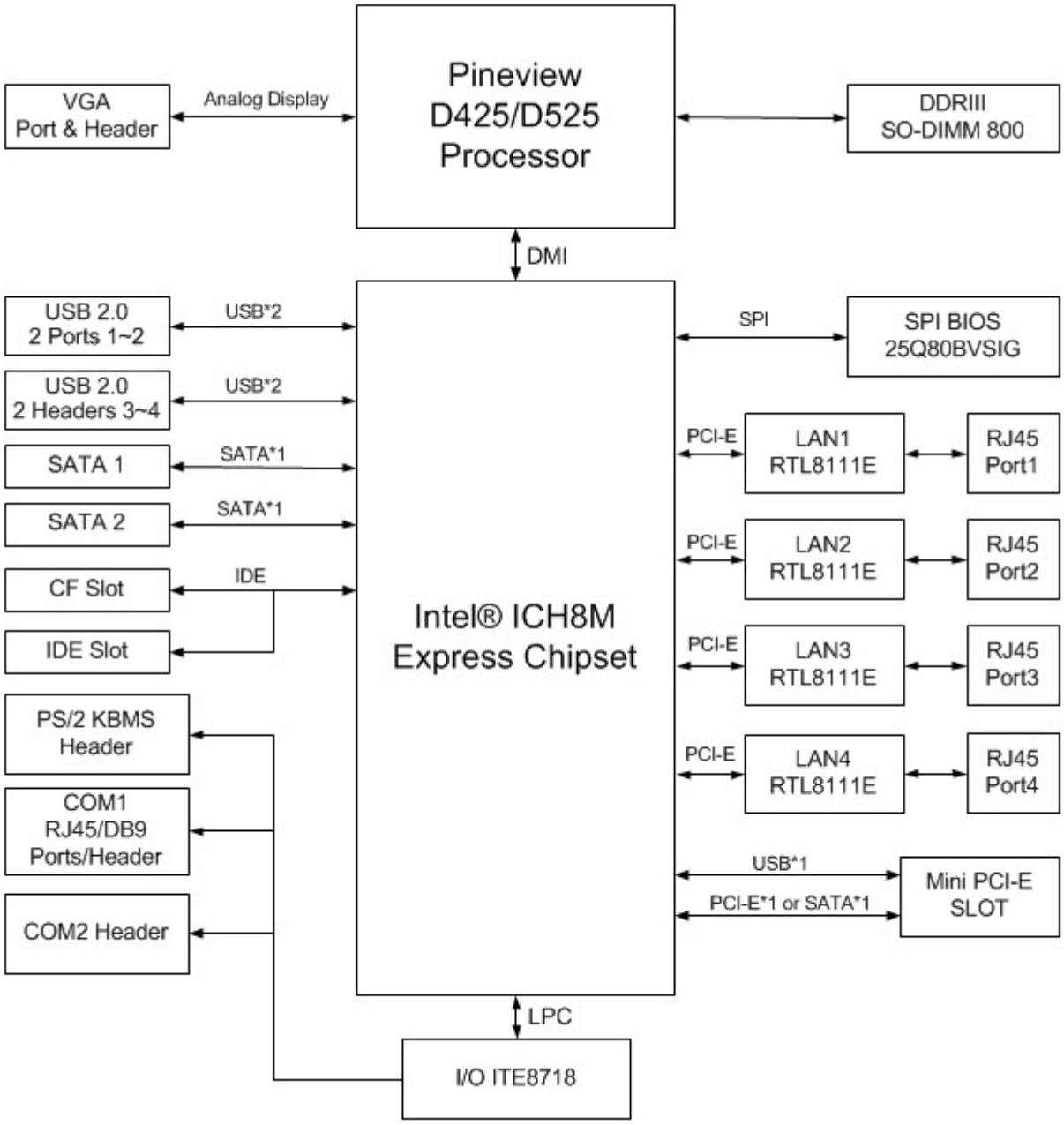
2. Specification

Model	NSE SV5-D52M04P/ NSE SV5-D42M04P
CPU	Intel Atom D525/D425, clock speed 1.8G
Chipset	Intel ICH8M
Memory	Support DDR3 800 MHz 1 * SO-DIMM Slot，Up to 4 GB Memory Size
Ethernet	4 * Realtek RTL8111E PCI-E Gigabit LAN
Storage	2 * Serial ATA ports 1*mSATA [1] 1*CF 1*IDE
Serial	2* RS232 COM1: RS-232 DB9 or RJ-45 Connector or Pin Header COM2: RS-232 Header
GPIO	6* GPIO
Other Ports	1* VGA（Header and DB15 port） 4 * USB2.0 (2 * Rear I/O + 2 * Pin Header) 1 * PS/2 Header 1 * Mini PCI-E [1] 1 * SYS_FAN Socket 1 * CPU_FAN Socket
Temperature	Storage: -20~75℃ Operating: 0~60℃
BIOS	Phoenix BIOS
Factor	5.25 Inch

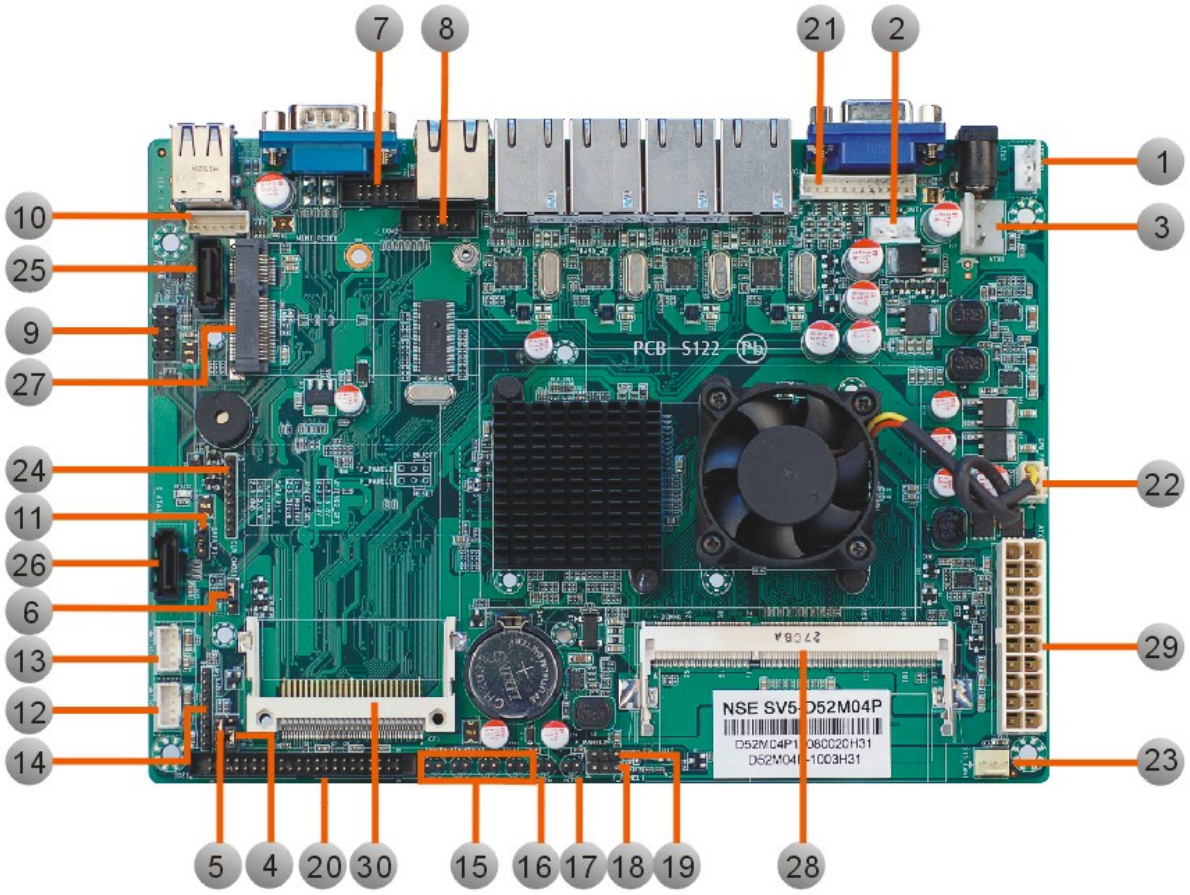
Notes:

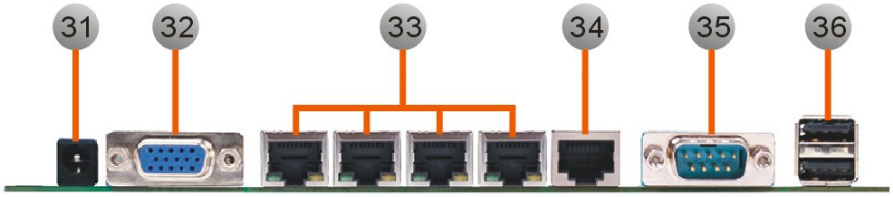
[1] : mSATA and Mini PCI-E are using the same interface, so only one function can be used at one time, if you need the other function, it would need some hardware changes supported.

3. Data Flow


Pineview
D425/D525
Processor
VGA
Port & Header
Analog Display
DDRIII
SO-DIMM 800
DMI
USB 2.0
2 Ports 1~2
USB*2
USB 2.0
2 Headers 3~4
USB*2
SATA 1
SATA*1
SATA 2
SATA*1
CF Slot
IDE
IDE Slot
Intel® ICH8M
Express Chipset
SPI
SPI BIOS
25Q80BVSIG
PCI-E
LAN1
RTL8111E
RJ45
Port1
PCI-E
LAN2
RTL8111E
RJ45
Port2
PCI-E
LAN3
RTL8111E
RJ45
Port3
PCI-E
LAN4
RTL8111E
RJ45
Port4
USB*1
PCI-E*1 or SATA*1
Mini PCI-E
SLOT
PS/2 KBMS
Header
COM1
RJ45/DB9
Ports/Header
COM2 Header
LPC
I/O ITE8718

4. Jumpers / Headers and Connectors





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Jumpers / Headers and Connectors					
1	DC Power Input Connector	P_8	19	Front Panel2 Header	P_{11}
2	DC Power Output Connector	P_8	20	IDE1 Header	P_{12}
3	DC Power Connector	P_8	21	VGA Expansion Header	P_{13}
4	CF Card Power Supply Control Jumper	P_8	22	CPU Fan Connector	P_{13}
5	CF Card Working Mode Selecting Jumper	P_8	23	System Fan Connector	P_{13}
6	CMOS Clear Header	P_8	24	Debug Header	
7	COM1 Header	P_9	25	SATA2 Connector	
8	COM2 Header	P_9	26	SATA1 Connector	
9	Front USB Header	P_9	27	Mini PCI-E Slot	
10	PS/2 Header	P_9	28	SO-DIMM Slot	
11	SATA1 (Pin 7) Power Selection Jumper	P_{10}	29	ATX Power Supply Connector	
12	SATA1 Power Supply Connector	P_{10}	30	CF Card Connector	
13	SATA2 Power Supply Connector	P_{10}	31	DC12V Power Supply Connector	
14	GPIO Header	P_{10}	32	VGA Connector	
15	LAN LED Headers	P_{10}	33	LAN Connectors [1]	
16	HD LED Header	P_{10}	34	RJ45 COM Connector	
17	Power LED Connector	P_{11}	35	COM Connector	
18	Front Panel1 Header	P_{11}	36	USB Connectors	

Notes:

[1]: Wakeup on Lan is supported by LAN1 and can also be supported by other LAN ports according to your needs, but only one port has this function.

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5. Definition of Jumpers / Headers and Connector

[1] DC Power Input Connector (4*1 Pin 2.54mm)

Location	Connector	Pin	Definition	Pin	Definition
1	12V_IN1	1	+ 12V IN	2	+ 12V IN
		3	GND	4	GND

[2] DC Power Output Connector (4*1 Pin 2.54mm)

Location	Connector	Pin	Definition	Pin	Definition
2	12V_OUT1	1	+ 12V OUT	2	+ 12V OUT
		3	GND	4	GND

Warning: DC Power Output Connector CAN NOT be used as Input port!

[3] DC Power Connector (2*1 Pin 3.96mm)

Location	Connector	Pin	Definition	Pin	Definition
3	ATX6	1	+ 12V IN	2	GND

[4] CF Card Power Supply Control Jumper (3*1 Pin 2.54mm)

Location	Jumper	Setting	Function
4	JP7	1-2	5V Power Supply
		2-3(Default)	3.3V Power Supply

[5] CF Card Working Mode Selecting Jumper (3*1 Pin 2.54mm)

Location	Jumper	Setting	Function
5	JP8	1-2(Default)	IDE Master
		2-3	IDE Slave

[6] CMOS Clear Header (3*1 Pin 2.54mm)

Location	Jumper	Setting	Function
6	CLR_CMOS	1-2(Default)	Normal
		2-3	Clear CMOS

[7] COM1 Header (5*2 Pin 2.0mm)

Location	Header	Pin	Definition	Pin	Definition
7	J_COM1	1	DCD	2	RXD
		3	TXD	4	DTR
		5	GND	6	DSR
		7	RTS	8	CTS
		9	RI		

[8] COM2 Header (5*2 Pin 2.0mm)

Location	Header	Pin	Definition	Pin	Definition
8	J_COM2	1	DCD	2	RXD
		3	TXD	4	DTR
		5	GND	6	DSR
		7	RTS	8	CTS
		9	RI		

[9] Front USB Header（5*2 Pin 2.54 mm）

Location	Header	Pin	Definition	Pin	Definition
9	F_USB1	1	+ 5V	2	+ 5V
		3	USB0-	4	USB1-
		5	USB0+	6	USB1+
		7	GND	8	GND
				10	N/C

[10] PS/2 Header (6*1 Pin 2.0mm)

Location	Header	Pin	Definition	Pin	Definition
10	KBMS1	1	KB CLK	2	KB DATA
		3	MS CLK	4	GND
		5	+ 5V	6	MS DATA

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[11] SATA1 (Pin7) Power Selection Jumper (3*1 Pin 2.54mm)

Location	Jumper	Setting	Function
11	SATA_P1	1-2	+ 5V
		2-3(Default)	GND

Note: When Pin7 of SATA1 set to +5V (SATA_P1 jumps to 1-2), SATA1 can support SATA DOM.

[12] SATA1 Power Supply Connector (4*1 Pin 2.0mm)

Location	Connector	Pin	Definition	Pin	Definition
12	P_SATA1	1	+ 12V	2	GND
		3	GND	4	+ 5V

[13] SATA2 Power Supply Connector (4*1 Pin 2.0mm)

Location	Connector	Pin	Definition	Pin	Definition
13	P_SATA2	1	+ 12V	2	GND
		3	GND	4	+ 5V

[14] GPIO Header (9*1 Pin 2.0mm)

Location	Header	Pin	Definition	Pin	Definition
14	JP1	1	+ 5V	2	N/C
		3	GPI32 (0X802 Bit2)	4	GPI31 (0X802 Bit1)
		5	GPI30 (0X802 Bit0)	6	GPO27 (0X801 Bit7)
		7	GPO26 (0X801 Bit6)	8	GPO25 (0X801 Bit5)
		9	GND		

[15] LAN LED Headers (2*1 Pin 2.54mm)

Location	Connector	Pin	Definition	Pin	Definition
15	LAN_LED (1、2、3、4)	1	LAN_ACT+	2	LAN_ACT-

[16] HD LED Header (2*1 Pin 2.54mm)

Location	Connector	Pin	Definition	Pin	Definition
16	HD_LED1	1	HD_LED+	2	HD_LED-

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[17] Power LED Header (2*1 Pin 2.54mm)

Location	Connector	Pin	Definition	Pin	Definition
17	PW_LED1	1	PWR_LED+	2	PWR_LED-

[18] Front Panel1 Header (3*1 Pin 2.54mm)

Location	Connector	Pin	Definition	Pin	Definition
18	F_PANEL1	1	GND	2	RST_SW+
		3	RST_SW-		

[19] Front Panel2 Header (3*1 Pin 2.54mm)

Location	Connector	Pin	Definition	Pin	Definition
19	F_PANEL2	1	N/C	2	PWR_SW+
		3	PWR_SW-		

[20] IDE1 Header(22*2 Pin 2.00mm)

Location	Header	Pin	Definition	Pin	Definition
20	IDE1	1	-RST1	2	GND
		3	IDE_PDD7	4	IDE_PDD8
		5	IDE_PDD6	6	IDE_PDD9
		7	IDE_PDD5	8	IDE_PDD10
		9	IDE_PDD4	10	IDE_PDD11
		11	IDE_PDD3	12	IDE_PDD12
		13	IDE_PDD2	14	IDE_PDD13
		15	IDE_PDD1	16	IDE_PDD14
		17	IDE_PDD0	18	IDE_PDD15
		19	GND		
		21	IDE_PDDREQ	22	GND
		23	IDE_PDIOW_N	24	GND
		25	IDE_PDIOR_N	26	GND
		27	IDE_PDIORDY	28	IDE_PD_CSEL
		29	IDE_PDDACK_N	30	GND
		31	INT_IRQ14	32	N/C
		33	IDE_PDA1	34	IDE_PATADET
		35	IDE_PDA0	36	IDE_PDA2
		37	IDE_PDCS1_N	38	IDE_PDCS3_N
		39	-IDEACTP	40	GND
		41	+ 5V	42	+ 5V
		43	GND	44	N/C

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[21] VGA Expansion Header (12*1 Pin 2.0mm)

Location	Header	Pin	Definition	Pin	Definition
21	VGA2	1	GND	2	VSYNC
		3	HSYNC	4	GND
		5	RED	6	GND
		7	GREEN	8	GND
		9	BLUE	10	GND
		11	DDC_DATA	12	DDC_CLK

[22] CPU Fan Connector (3*1 Pin 2.54 mm)

Location	Header	Pin	Definition	Pin	Definition
22	CPU_FAN1	1	GND	2	+ 12V
		3	FAN IO		

[23] System Fan Connector (3*1 Pin 2.54 mm)

Location	Header	Pin	Definition	Pin	Definition
23	SYS_FAN1	1	GND	2	+ 12V
		3	+ 5V		

6. BIOS setup

See “NSE SV5-D52M04P BIOS User Manual” for detail information of BIOS setup.

【End】